

حمل الآن

مجاناً وحصرياً

المراجعة رقم (1)

اختبار شهر اكتوبر



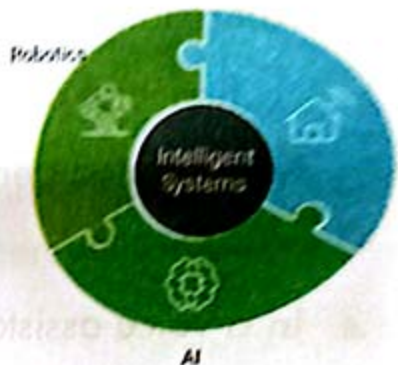
Summary

of Unit 1

Lesson 1 Intelligent Systems and Their Impact on Climate Change

1 Interconnected Intelligent Systems: It combines three important technologies

- 1 IoT: connects devices to the internet.
- 2 AI: analyzes information and makes decisions like humans.
- 3 Robotics: devices that move and perform tasks.



2 Example on Smart Car Breakdown:

- 1 IoT: sends location and problem data to a service center.
- 2 AI: analyzes the cause and suggests solutions.
- 3 Robotics: repairs the car or requests a transport vehicle.

3 Practical Applications in Daily Life:

- » Smart Home: IoT controls devices, AI predicts needs, robots clean and assist.
- » School Robot: IoT connects to resources, AI answers questions, robot communicates.
- » Smart Farming: IoT monitors soil, AI analyzes, robots irrigate or spray pesticides.
- » Voice Assistant: IoT accesses info, AI understands speech.
- » Smart Car: IoT connects to maps, AI monitors hazards, robots control movement.

4 Impact on Climate Change:

Global Warming: IoT measures pollution, AI suggests solutions, robots plant trees/purify air.

Air Pollution: IoT monitors gases, AI identifies areas, robots use air purifiers.

Water Shortage/Drought: IoT measures soil, AI calculates water, robots irrigate efficiently.

Floods: IoT measures rainfall, AI sends warnings, robots assist in rescue.

Melting Ice: IoT monitors melting, AI predicts risks, robots collect data and support prevention.



Lesson 2 Advanced Cyber Threats

» These are not simple viruses, but planned attacks that exploit system vulnerabilities or user behavior.

1 Ransomware:

- » A type of malware that encrypts files or locks devices and demands ransom money to restore access.
- » It spread through suspicious emails, malicious links, fake websites, or untrusted downloads.

2 Advanced Social Engineering:

- » Not a hack of systems, but a hack of minds
- » It Tricks people into giving confidential information.

Spear Phishing: Personalized fake emails or messages targeting specific individuals or organizations

Pretexting: Attacker creates a fake story (e.g., pretending to be bank staff or technical support).

Baiting: Offering something attractive (like a free USB drive with malware).

3 Distributed Denial of Service (DDoS) Attacks:

- » Attackers use many **botnets** (infected devices) to access a website at the same time.
- » The website becomes slows down or disabled.
- » This prevents legitimate (real) users from accessing it.

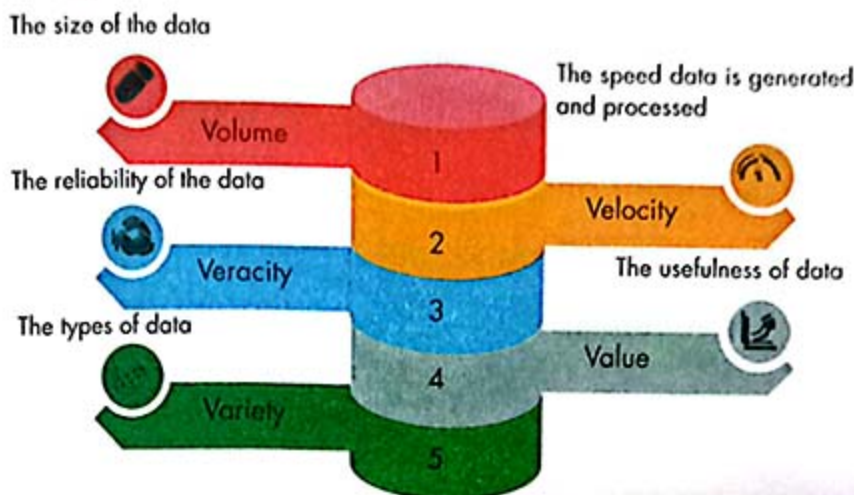
Lesson 3 Big Data

- » Large and complex data that cannot be processed efficiently using traditional tools (like Excel).
- » Sources of Big Data:

- 1 Internet-connected devices (IoT): Smart watches, refrigerators, cars collect usage, location, and activity data.
- 2 Social Media: Posts, comments, photos, videos, likes generate massive data (sometimes unreliable).
- 3 Financial Data: Payments, transactions, and stock trading record amounts, users, times, and locations.
- 4 Smart Devices: Phones, cameras, and smart home devices track location, apps, and interactions.
- 5 Digital Content: Videos, images, and audio generate data from views, comments, and shares.
- 6 Government Data: Population registers, censuses, taxes, surveys.
- 7 Geographic and Spatial Data: Satellites and GPS provide maps, traffic, and environmental data.



» The 5Vs of Big Data:



» Types of Big Data:

Structured Data: Organized in tables with rows and columns. (e.g., customer data, transactions).

Unstructured Data: No clear structure; includes text, images, videos, social media posts.

Semi-Structured Data: A mix of both; such as emails (structured parts like sender, recipient / unstructured like message body).



Exercises

on Lesson 1

1 Choose the correct answer:

- 1 Which of the following technologies allow(s) devices to connect to the internet and exchange data?
a. AI b. Robotics c. IoT d. VR
- 2 What is the main function of artificial intelligence (AI)?
a. Data transfer only. b. Data analysis and decision making.
c. Device manufacturing. d. Powering the internet.
- 3 What is the name given to systems that combine IoT, AI, and robotics?
a. Traditional systems. b. Manual systems.
c. Mechanical systems. d. Interconnected intelligent systems.
- 4 How does IoT help in a smart home?
a. By shutting down all devices. b. By repairing broken devices.
c. By connecting devices to the internet to control them.
d. By manually operating devices.
- 5 Why is artificial intelligence important in intelligent systems?
a. Because it analyzes data and makes intelligent decisions
b. Because it manufactures devices.
c. Because it repairs broken devices.
d. Because it provides free internet.
- 6 How can robots help in agriculture?
a. By selling crops. b. By automatically watering plants.
c. By shutting down farms. d. By storing water only.

- 7  What is the main role of sensors in IoT?
- a. Sending text messages.
 - b. Manually operating devices.
 - c. Collecting and transferring data.
 - d. Repairing networks.
- 8  How can smart systems help reduce pollution?
- a. By increasing vehicle exhausts.
 - b. By ignoring the problem.
 - c. By shutting down all factories.
 - d. By monitoring air quality and suggesting solutions.
- 9  If a car is equipped with IoT and AI, what can it do when a malfunction occurs?
- a. Send a message to the maintenance center with the location.
 - b. Turn off without informing the driver.
 - c. Wait until the driver detects the fault.
 - d. Shut down all systems.
- 10  How can AI help manage energy in a smart home?
- a. By turning on appliances randomly.
 - b. By analyzing usage patterns and saving energy.
 - c. By turning off electricity completely.
 - d. By increasing energy consumption.
- 11  If the soil is dry, how can smart systems in agriculture react?
- a. Ignore the problem.
 - b. Reduce the amount of water.
 - c. Send a message to the farmer without taking any action.
 - d. Irrigate the soil automatically.
- 12  How can robots help in floods?
- a. By increasing the water level.
 - b. By closing all roads for no reason.
 - c. By draining water or rescuing people.
 - d. By ignoring warnings.

- 13  What action can AI take when it detects increased air pollution?
- a. Ignore the data.
 - b. Send warnings to residents and reduce factory emissions.
 - c. Increase pollution intentionally.
 - d. Turn off all devices.
- 14  What is the main difference between IoT and AI?
- a. AI connects to the internet, while IoT analyzes data.
 - b. IoT builds robots, while AI repairs them.
 - c. IoT connects to the internet, while AI analyzes data.
 - d. There is no difference between them.
- 15  Why are robots considered an important part of intelligent systems?
- a. Because they completely replace humans.
 - b. Because they perform mechanical or motor tasks based on AI decisions.
 - c. Because they operate without an internet connection.
 - d. Because they only analyze data.
- 16  How can intelligent systems help fight melting ice?
- a. By increasing the temperature.
 - b. By melting the ice more quickly.
 - c. By ignoring the problem.
 - d. By monitoring the melting rate and proposing solutions.
- 17  What is the potential drawback of fully relying on IoT for smart systems?
- a. Reducing the efficiency of devices.
 - b. Increasing the internet speed.
 - c. Inability to make decisions without AI.
 - d. No need for robots.

- 18**  How can AI improve the efficiency of self-driving cars?
- a.** By increasing fuel consumption.
 - b.** By analyzing traffic and making safe decisions.
 - c.** By stopping the car suddenly.
 - d.** By ignoring traffic signals.
- 19**  If you wanted to design a smart system to reduce water consumption in a school, what components would you need?
- a.** IoT to monitor water consumption, AI to analyze data, and robots to automatically turn off taps.
 - b.** Air conditioners only.
 - c.** Smartphones without an internet connection.
 - d.** Standard lighting systems.
- 20**  How can robots be integrated into education using smart systems?
- a.** By completely replacing teachers.
 - b.** By ignoring students' needs.
 - c.** By stopping all educational activities.
 - d.** By helping students solve questions and providing interactive explanations.
- 21**  What is the suggested smart solution to address the problem of drought in agriculture?
- a.** Using IoT to measure soil moisture, AI to calculate the required amount of water, and robots for automatic irrigation.
 - b.** Increasing water irrigation without analysis.
 - c.** Stopping agriculture completely.
 - d.** Relying only on rainfall.

- 22  How can a regular hospital be transformed into a smart hospital using smart systems?
- a. By removing all medical devices.
 - b. By stopping all medical services.
 - c. By linking medical devices to IoT, using AI to diagnose patients, and robots to assist in operations.
 - d. By relying only on staff.
- 23  What is the smart solution to reduce traffic congestion in major cities?
- a. Increasing the number of cars.
 - b. Using IoT to monitor traffic, AI to analyze data and direct cars, and robots to manage traffic lights.
 - c. Closing all roads.
 - d. Ignoring the problem.
- 24  What is the main drawback of using robots in elderly care?
- a. Inability to provide emotional support like humans.
 - b. Increased efficiency.
 - c. Time saving.
 - d. Cost reduction.
- 25  How can the impact of intelligent systems on the environment be evaluated?
- a. They are not useful.
 - b. They help monitor pollution and suggest sustainable solutions.
 - c. They increase pollution.
 - d. They are simply expensive.
- 26  What is one potential downside of self-driving cars?
- a. Their complete reliance on artificial intelligence may lead to errors in the event of a system failure.
 - b. They save energy.
 - c. They improve road safety.
 - d. They reduce accidents.

- 27  How can the role of artificial intelligence in education be evaluated?
- a. It completely replaces teachers.
 - b. It is not useful.
 - c. It reduces students' interaction.
 - d. It is a tool to enhance the learning experience and provide personalized explanation.
- 28  If you were asked to design a robot to assist the elderly, what features would you add?
- a. The ability to remind them of their medication times and call for help in emergencies.
 - b. The ability to clean only.
 - c. The ability to play only.
 - d. Not communicating with them.
- 29  How can an early warning system for natural disasters be developed using smart systems?
- a. By ignoring data.
 - b. By waiting until the disaster occurs.
 - c. By shutting down all systems.
 - d. By connecting sensors to the IoT, using AI to predict disasters, and sending warnings via robots.
- 30  What is an innovative function for using robots in public parks?
- a. Planting and trimming trees, and cleaning parks automatically.
 - b. Neglecting plants.
 - c. Increasing litter.
 - d. Not caring for visitors.

- 31  How can energy efficiency in cities be improved using smart systems?
- a. By increasing the consumption.
 - b. By turning off electricity completely.
 - c. By using IoT to monitor consumption, AI to analyze data, and robots to automatically adjust appliances.
 - d. By ignoring the problem.
- 32  What are some innovative solutions to reduce waste in homes?
- a. Increased waste.
 - b. Using robots to automatically sort waste, IoT to monitor quantities, and AI to suggest recycling routes.
 - c. Dumping waste on the streets.
 - d. Inattention.
- 33  What do IoT, AI, and robotics have in common in smart systems?
- a. They all operate independently without connectivity.
 - b. There is no commonality.
 - c. They are limited to large industries only.
 - d. They integrate to create smart systems capable of communication, analysis, and implementation.
- 34  What is the biggest challenge in implementing smart systems on a large scale?
- a. High cost and maintenance requirements.
 - b. Increased speed.
 - c. Decreased efficiency.
 - d. Unnecessary.
- 35  How can smart systems improve the quality of life in cities?
- a. By increasing pollution.
 - b. By shutting down all services.
 - c. By improving services such as transportation, health, and energy management.
 - d. By ignoring the needs of the inhabitants.

- 36  What is the evidence that smart systems are successful in agriculture?
- a. Improving crops and reducing waste through smart irrigation and precise monitoring.
 - b. Increasing water waste.
 - c. Neglecting farms.
 - d. No results found.
- 37  What is the most balanced view about the future of smart systems?
- a. They will completely replace humans in all areas.
 - b. They will be life-enhancing tools with ethical controls.
 - c. They will be completely useless.
 - d. They will only increase problems.

2 Put (T) or (F):

- 1 IoT connects devices to the internet for sharing data. ()
- 2 Robotics involve devices that can move and perform tasks similar to humans. ()
- 3 Interconnected intelligent systems need humans to control every action. ()
- 4 In a smart home, AI can turn on the air conditioner before you arrive. ()
- 5 A smart car uses robotics to analyze road hazards. ()
- 6 IoT in smart farming measures soil moisture to determine watering needs. ()
- 7 Voice assistants use robotics to respond to questions. ()
- 8 Smart systems can help reduce air pollution by measuring harmful gases. ()
- 9 Global warming is caused by a decrease in carbon dioxide emissions. ()
- 10 Smart systems can predict floods by measuring rainfall. ()

3 Complete in the blanks:

- 1 connects devices to the internet to exchange data.
- 2 allows machines to think like humans and make decisions.
- 3 A car can detect dangers on the road and stop automatically.
- 4 Excessive use of water and lack of rain cause a problem called
- 5 In smart farming, measure the soil moisture and send data to the system.
- 6 are created by combining IoT, AI, and robotics.



Exercises

on Lesson 2

1 Choose the correct answer:

- 1 Ransomware is a type of
a. hardware b. malware c. good software d. password
- 2 Which of the following is an example of ransomware?
a. A program that displays annoying ads.
b. A program that encrypts your files and demands a ransom to decrypt them.
c. A program that cleans temporary files from your device.
d. A program that helps you organize your files.
- 3 Advanced cyber threats target
a. devices b. users c. systems d. all of them
- 4 What is the primary goal of a distributed denial-of-service (DDoS) attack?
a. Stealing users' data. b. Disabling a website or online service.
c. Spreading false information. d. Spying on users' communications.
- 5 is considered a hack of minds rather than software.
a. DDoS attack b. Ransomware
c. Social engineering d. None of them
- 6 Ransomware demands to unlock files.
a. passwords b. money c. software d. updates
- 7 All of the following are ways ransomware can spread, except
a. malicious links b. safe websites
c. suspicious emails d. untrusted software
- 8 Which of the following is considered a social engineering technique?
a. Using programs to crack passwords.
b. Tricking people into revealing their information.
c. Sending viruses via emails.
d. Exploiting software vulnerabilities.

- 9 A fake email pretending to be from the bank is an example of
 a. pretexting b. baiting c. spear phishing d. ransomware
- 10 In a DDoS attack, attackers use many devices called
 a. viruses b. botnets c. passwords d. servers
- 11  What are the botnets used in DDoS attacks?
 a. Advanced artificial intelligence programs.
 b. A network of compromised devices that are remotely controlled.
 c. Superfast computers. d. A group of secure servers.
- 12 All of the following are social engineering methods, except
 a. baiting b. pretexting c. spear phishing d. ransomware
- 13  What does the term security updates mean?
 a. Changing the appearance of the operating system.
 b. Adding new features to the software.
 c. Fixing security vulnerabilities in software and hardware.
 d. Speeding up applications performance.

2 Put (T) or (F):

- 1 Advanced cyber threats only target devices. ()
- 2  Ransomware permanently damages your device. ()
- 3 Spear phishing targets specific people or organizations. ()
- 4  Distributed denial-of-service (DDoS) attacks target only one device. ()
- 5 Baiting involves giving free USB drives with malware. ()
- 6  Social engineering relies on exploiting vulnerabilities in technical systems. ()
- 7 Updating antivirus software helps prevent ransomware. ()
- 8 In a DDoS attack, attackers often use botnets. ()
- 9  Sharing your personal information with anyone you trust online is always safe. ()
- 10 Spear phishing uses personal information to seem convincing. ()

- 11 DDoS attacks allow legitimate users to access the websites. ()
- 12 Sharing your password is the best way to stay safe online. ()
- 13 Pretexting, baiting, and spear phishing are social engineering methods. ()

3 Complete in the blanks:

- 1  An program helps detect and remove malware from your device.
- 2  Attempts to steal your personal information via fake emails are called
- 3  A program encrypts your files and demands a ransom to recover them.
- 4  A attack aims to disable a website or online service by sending massive amounts of requests.
- 5  The art of tricking people into giving up confidential information is called
- 6  In DDoS attacks, a network of compromised devices is called
- 7  A targeted is an advanced type of phishing that targets specific individuals.
- 8 Social engineering is called a hack of instead of hardware or software.
- 9 In, the attacker uses a fake story to trick the victim.
- 10 Offering a free USB that contains malware is an example of
- 11 is an abbreviation of a Distributed Denial-of-Service attack.
- 12 Baiting, pretexting, and spear phishing are examples of methods.



Exercises

on Lesson 3

1 Choose the correct answer:

- Big data cannot be processed efficiently using
a. Hadoop b. SQL c. Excel d. none of them
- A smart watch collecting heart rate is an example of data from
a. IoT devices b. social media
c. financial systems d. GPS
- The value in big data means the
a. size b. speed c. usefulness d. variety
- Electronic payments and stock trading are sources of
a. GPS data b. financial data
c. digital content d. device data
- in the 5Vs of big data refers to the reliability and quality of the data.
a. Velocity b. Variety c. Value d. Veracity
- Population census is an example of
a. social media b. governmental data
c. GPS d. financial data
- Data organized in tables is an example of
a. structured data b. unstructured data
c. semi-structured data d. random data
- in the 5Vs of big data refers to the speed of data.
a. Variety b. Velocity c. volume d. Value
- Instagram posts and Facebook comments are examples of data from
a. government b. social media
c. IoT d. sensors

- 10 Government data includes
 a. censuses b. taxes c. statistics d. all of them
- 11 A Facebook post containing text, images, and videos is an example of
 a. structured data b. semi-structured data
 c. unstructured data d. none of them
- 12 The number of views and comments on a YouTube video is considered
 a. financial data b. digital content
 c. IoT data d. government data
- 13 In the 5Vs of big data, which 'V' refers to the massive amount of data?
 a. Velocity b. Variety c. Value d. Volume
- 14 Email data is an example of data.
 a. structured b. semi-structured
 c. unstructured d. none of them

2 Put (T) or (F):

- 1  Digital content, such as videos, generates big data. ()
- 2  Big data can be easily processed using Excel. ()
- 3  Big data analysis allows analysts, researchers, and entrepreneurs to make better and faster decisions. ()
- 4  All data collected through social media is documented. ()
- 5  When you make an online purchase using a credit card, data about the amount, the store, and the geographic location is recorded. ()
- 6  Your mobile phone constantly tracks your geographic location and collects data about the places you visit and the apps you use. ()
- 7  Videos, images, and audio content uploaded or viewed online do not generate big data. ()
- 8  Governments generate data through population registers, statistics, tax data, and censuses. ()

- 9  Satellites and GPS devices collect data about geographic locations, roads, and the environment. ()
- 10  The characteristics of big data include volume and value. ()
- 11  The speed of data generation is not a characteristic of big data. ()
- 12  The variety of data types includes structured data (such as databases) and unstructured data (such as text, images, and videos). ()
- 13  Veracity refers to the reliability and quality of data. ()
- 14  Structured data is data that comes in an unstructured form, such as customer data and financial data. ()
- 15  Unstructured data is data that does not come in a structured form, such as tables or databases. ()
- 16  Semi-structured data is a hybrid of structured and unstructured data. ()
- 17  Emails are a good example of structured data. ()

3 Complete in the blanks:

- 1 Big data is a collection of large, data that cannot be processed using
- 2 Text, images, and videos are examples of data.
- 3 The 5Vs of big data are,,,, and
- 4 data is organized in tables, like transaction records.
- 5 Satellites and GPS devices collect data about and
- 6 Emails are data, with unstructured text and structured sender/recipient.

كيفية طباعة صفحات معينة من ملف معين مثلا ازاي نطبع الصفحات من صفحة 4 الى صفحة 9



حمل الآن

مجاناً وحصرياً

المراجعة رقم (2)

اختبار شهر اكتوبر



Questions and Exercises on Lesson One

Q.1: Choose the correct answer from the following options:

1. Which of the following technologies allows devices to connect to the internet and exchange data?
 - a) AI
 - b) Robotics
 - c) IoT
 - d) VR
2. What is the main function of Artificial Intelligence (AI)?
 - a) Transferring data only.
 - b) *Analyzing data and making decisions.
 - c) Manufacturing devices.
 - d) Operating the internet.
3. What is the name given to systems that combine IoT, AI, and Robotics?
 - a) Traditional Systems.
 - b) Manual Systems.
 - c) Mechanical Systems.
 - d) *Interconnected Smart Systems.
4. How does IoT help in a smart home?
 - a) By turning off all devices.
 - b) By repairing broken devices.
 - c) By connecting devices to the internet for control.
 - d) By operating devices manually.
5. Why is Artificial Intelligence important in smart systems?
 - a) Because it analyzes data and makes smart decisions.
 - b) Because it manufactures devices.
 - c) Because it repairs broken devices.
 - d) Because it provides free internet.
6. How can robots help in agriculture?
 - a) By selling crops.
 - b) By watering plants automatically.
 - c) By stopping the farmer.
 - d) By storing water only.

7. What is the main role of sensors in IoT?
 - a) Sending text messages.
 - b) Operating devices manually.
 - c) Collecting and transmitting data.
 - d) Repairing networks.
8. How can smart systems help reduce pollution?
 - a) By increasing car emissions.
 - b) By ignoring the problem.
 - c) By shutting down all factories.
 - d) By monitoring air quality and suggesting solutions.
9. If a car is equipped with IoT and AI, what can it do when a malfunction occurs?
 - a) Send a message to the maintenance center with the location.
 - b) Shut down without informing the driver.
 - c) Wait until the driver discovers the malfunction.
 - d) Shut down all systems.
10. How can AI help manage energy in a smart home?
 - a) By operating devices randomly.
 - b) By analyzing usage patterns and saving energy.
 - c) By completely turning off the electricity.
 - d) By increasing energy consumption.
11. If the soil is dry, how can smart systems in agriculture act?
 - a) Ignore the problem.
 - b) Reduce the amount of water further.
 - c) Send a message to the farmer without taking any action.
 - d) Water the soil automatically.
12. How can robots help in flood situations?
 - a) By increasing the water level.
 - b) By closing all roads without reason.
 - c) By draining water or rescuing people.
 - d) By ignoring warnings.
13. What action can AI take upon detecting high air pollution?
 - a) Ignore the data.
 - b) Send warnings to residents and reduce factory emissions.
 - c) Intentionally increase pollution.
 - d) Shut down all devices.

14. What is the main difference between IoT and AI?
- a) AI connects to the internet, while IoT analyzes data.
 - b) IoT makes robots, while AI repairs them.
 - c) IoT connects to the internet, while AI analyzes data.
 - d) There is no difference between them.
15. Why are robots an important part of smart systems?
- a) Because they completely replace humans.
 - b) Because they perform mechanical or motor tasks based on AI decisions.
 - c) Because they work without any internet connection.
 - d) Because they only perform analysis.
16. How can smart systems help combat melting ice?
- a) By increasing the temperature.
 - b) By melting the ice faster.
 - c) By ignoring the problem.
 - d) By monitoring the melting rate and suggesting solutions.
17. What is a potential drawback of smart systems relying entirely on IoT?
- a) Reduced device efficiency.
 - b) Increased internet speed.
 - c) Inability to make decisions without AI.
 - d) No need for robots.
18. How can AI improve the efficiency of self-driving cars?
- a) By increasing fuel consumption.
 - b) By analyzing traffic and making safe decisions.
 - c) By stopping the car suddenly.
 - d) By ignoring traffic signals.
19. If you wanted to design a smart system to reduce water consumption at school, what components would you need?
- a) IoT to monitor water consumption, AI to analyze data, and robots to automatically close taps.
 - b) Air conditioning units only.
 - c) A smartphone without an internet connection.
 - d) A regular lighting system.

20. How can robots be integrated into education using smart systems?
- a) By completely replacing teachers.
 - b) By ignoring students' needs.
 - c) By stopping all educational activities.
 - d) By helping students solve questions and providing interactive explanations.
21. What is the proposed smart solution to face the problem of drought in agriculture?
- a) Using IoT to measure soil moisture, AI to calculate the required amount of water, and robots for automatic irrigation.
 - b) Increasing water irrigation without analysis.
 - c) Stopping agriculture altogether.
 - d) Relying on rain only.
22. How can a regular hospital be transformed into a smart hospital using smart systems?
- a) By removing all medical devices.
 - b) By stopping all medical services.
 - c) By connecting medical devices with IoT, using AI to diagnose patients, and robots to assist in operations.
 - d) By relying on staff only.
23. What is a smart solution to reduce traffic congestion in big cities?
- a) Increasing the number of cars.
 - b) Using IoT to monitor traffic, AI to analyze data and direct cars, and robots to manage traffic signals.
 - c) Closing all roads.
 - d) Ignoring the problem.
24. What is the main drawback of using robots in elderly care?
- a) Inability to provide emotional support like humans.
 - b) Increased efficiency.
 - c) Saving time.
 - d) Reducing costs.
25. How can the impact of smart systems on the environment be assessed?
- a) As being useless.
 - b) As helping to monitor pollution and propose sustainable solutions.
 - c) As increasing pollution.
 - d) As being only expensive.

26. What is one potential negative of self-driving cars?
- a) Their complete reliance on AI could lead to errors if the system fails.
 - b) Their energy savings.
 - c) Their improvement of road safety.
 - d) Their reduction of accidents.
27. How can the role of AI in education be evaluated?
- a) As completely replacing teachers.
 - b) As being useless.
 - c) As reducing student interaction.
 - d) As an assistive tool to enhance the learning experience and provide personalized explanations.
28. If you were asked to design a robot to help the elderly, what features would you include?
- a) Ability to remind them of medication times and call for help in emergencies.
 - b) Ability to clean only.
 - c) Ability to play only.
 - d) Not communicating with them.
29. How can an early warning system for natural disasters be developed using smart systems?
- a) By ignoring the data.
 - b) By waiting until the disaster occurs.
 - c) By shutting down all systems.
 - d) By connecting sensors to IoT, using AI to predict disasters, and sending warnings via robots.
30. What is an innovative function for using robots in public parks?
- a) Planting and trimming trees, and cleaning the parks automatically.
 - b) Neglecting plants.
 - c) Increasing litter.
 - d) Not caring for visitors.
31. How can energy efficiency in cities be improved using smart systems?
- a) By increasing consumption.
 - b) By completely turning off the electricity.
 - c) By using IoT to monitor consumption, AI to analyze data, and robots to adjust devices automatically.
 - d) By ignoring the problem.

32. What are innovative solutions to reduce waste in homes?
- a) Increasing waste.
 - b) Using robots to sort waste automatically, IoT to monitor quantities, and AI to suggest recycling methods.
 - c) Throwing waste in the streets.
 - d) Not caring.
33. What is the common factor between IoT, AI, and Robotics in smart systems?
- a) They all work separately without connection.
 - b) There is no common factor.
 - c) They are limited to large industries only.
 - d) They integrate to create smart systems capable of connection, analysis, and execution.
34. What is the biggest challenge in implementing smart systems on a large scale?
- a) High cost and maintenance needs.
 - b) Increased speed.
 - c) Reduced efficiency.
 - d) Not being needed.
35. How can smart systems improve the quality of life in cities?
- a) By increasing pollution.
 - b) By stopping all services.
 - c) By improving services such as transportation, health, and energy management.
 - d) By ignoring the needs of the population.
36. What is the evidence that smart systems are successful in agriculture?
- a) Improved crops and reduced waste through smart irrigation and precise monitoring.
 - b) Increased water waste.
 - c) Neglect of farms.
 - d) No results.
37. What is the most balanced opinion on the future of smart systems?
- a) They will completely replace humans in all fields.
 - b) They will be assistive tools to improve life, with the need for ethical controls.
 - c) They will be completely useless.
 - d) They will only increase problems.

Questions and Exercises on Lesson Two

First: Choose the correct answer from the following options:

1. Which of the following is an example of Ransomware?
 - a) A program that displays annoying ads.
 - b) A program that encrypts your files and demands a ransom to decrypt them.
 - c) A program that cleans temporary files from your device.
 - d) A program that helps you organize your files.
2. What is the primary goal of Distributed Denial of Service (DDoS) attacks?
 - a) Stealing user data.
 - b) Disabling a website or online service.
 - c) Spreading false information.
 - d) Spying on user communications.
3. Which of the following methods is considered a social engineering technique?
 - a) Using password cracking software.
 - b) Tricking people into revealing their information.
 - c) Sending viruses via email.
 - d) Exploiting vulnerabilities in software.
4. What does the term "security updates" mean?
 - a) Changing the appearance of the operating system.
 - b) Adding new features to programs.
 - c) Fixing security vulnerabilities in software and hardware.
 - d) Speeding up applications.
5. What are the "Botnets" used in DDoS attacks?
 - a) Advanced artificial intelligence programs.
 - b) A network of compromised devices controlled remotely.
 - c) Super-fast computers.
 - d) A group of secure servers.

Second: Mark (✓) for the correct statement and (×) for the incorrect statement:

1. Ransomware permanently damages your device. ()
2. Distributed Denial of Service (DDoS) attacks target only one device. ()
3. Social engineering relies on exploiting weaknesses in technical systems. ()
4. Sharing your personal information with anyone you trust on the internet is always safe. ()

Third: Fill in the blanks:

1. An program helps detect and remove malicious software from your device.
2. Trying to steal your personal information through fake emails is called
3. programs encrypt your files and demand a ransom to recover them.
4. attacks aim to disable a website or online service by sending huge amounts of requests.
5. The art of deceiving people to obtain confidential information is called
6. In DDoS attacks, a network of compromised devices called a
7. is considered an advanced type of phishing that targets specific individuals.

Self-Assessment

Go back to the objectives at the beginning of the lesson and put a checkmark (✓) in the appropriate box for "I can..."

Questions and Exercises for Lesson Three:

Q.1: Mark (✓) next to the correct statement and (x) next to the incorrect statement:

1. Big data can be easily processed using Excel. ()
2. Big data analytics allows analysts, researchers, and entrepreneurs to make better and faster decisions. ()
3. Connected devices are considered a source of big data. ()
4. All data obtained through social media is documented. ()
5. Financial data is not considered big data. ()
6. When making an online purchase using a credit card, data is recorded about the amount, the store, and the geographical location. ()
7. Smartphones do not contribute to generating big data. ()
8. A mobile phone continuously tracks your geographical location and collects data about places you've visited and applications you've used. ()
9. Digital content such as videos generates big data. ()
10. Videos, photos, and audio content uploaded or viewed online do not generate large data. ()
11. Governments generate data through population records, statistics, tax data, and census. ()
12. Satellites and GPS devices collect data about geographical locations, roads, and the environment from the characteristics of big data "Volume" and "Value". ()
13. The speed of data production is not among the characteristics of big data. ()
14. The diversity of data types includes structured data (such as databases) and unstructured data (such as texts, images, and videos). ()
15. Veracity refers to the reliability and quality of data. ()
16. Structured data is data that comes in an unorganized form such as customer data and financial data. ()

17. Unstructured data is data that does not come in an organized form such as tables or databases. ()
18. Semi-structured data is a mix of structured and unstructured data. ()
19. Email messages are a good example of structured data. ()

حمل الآن

مجاناً وحصرياً

المراجعة رقم (3)

اختبار شهر اكتوبر



Lesson 1: Smart Systems and Their Impact on Climate Change

1. Concept of Interconnected Smart Systems (IoT – AI – Robotics)

- Today, devices can communicate, think, and act automatically.
- This happens through technologies combining:
 - Internet of Things (IoT)
 - Artificial Intelligence (AI)
 - Robotics
- **Example:**
 - Smart home systems adjust lighting and temperature automatically.
 - AI learns your habits (e.g., when you return home) and acts accordingly.
 - Robots can clean or prepare tasks before your arrival.

2. Real-Life Example: Car Engine Breakdown

- **IoT:** Sensors send location and fault information via the Internet.
- **AI:** Analyzes the issue and suggests solutions.
- **Robotics:** A repair robot is sent to fix the problem on-site.

Smart Component

Function

IoT	Sending data and location
AI	Analyzing and decision-making
Robotics	Executing the fix or providing help

3. Daily Applications of Smart Systems

- **Smart Home:**
 - IoT connects devices.
 - AI controls temperature and lighting.
 - Robots assist with cleaning or moving objects.



- **School Robot:**

- IoT connects to online resources.
- AI understands questions and answers.
- Robot responds by talking or writing.

- **Smart Farming:**

- Sensors collect soil data.
- AI analyzes and decides irrigation needs.
- Robots water crops automatically.

- **Voice Assistant:**

- IoT connects to the Internet.
- AI understands and answers questions.
- No robots involved.

- **Smart Car:**

- IoT links to GPS and maps.
- AI detects road risks.
- Robots control car movement.

4. Smart Systems and Climate Change

Climate problems today:

- Global warming
- Air pollution
- Melting ice
- Drought
- Flooding

Smart systems help reduce pollution and protect the planet.

a. *Global Warming*

- Cause: Emissions from factories and cars.
- Smart solution:
 - IoT measures temperature and pollution.

AI suggests solutions to reduce emissions.

Robotics plant trees or clean the air.



b. Air Pollution

- Cause: Car exhaust, factory emissions, burning waste.
- Smart solution:
 - IoT detects pollution levels.
 - AI identifies hot spots.
 - Robotics clean the air or plant greenery.

c. Water Shortage & Drought

- Cause: Overuse of water, low rainfall.
- Smart solution:
 - IoT measures soil moisture.
 - AI calculates water needs.
 - Robotics irrigate only when needed.

d. Flooding & Heavy Rain

- Cause: Sudden climate changes.
- Smart solution:
 - IoT measures rainfall and water flow.
 - AI sends early flood warnings.
 - Robotics help drain water and rescue.

e. Melting Ice

- Cause: Rising global temperatures.
- Smart solution:
 - IoT monitors ice melting rates.
 - AI predicts future melting.
 - Robotics collect data to support climate action.

5. Conclusion

- Smart systems are not just inventions — they're tools to **protect our planet**.
-  By using IoT, AI, and Robotics together, we can **monitor the environment, reduce pollution, and build a sustainable future**.

✿ Lesson 1 Qestions

A. True or False (8 Questions)

1. Smart systems can help reduce energy waste. ()
2. Internet of Things means connecting devices together. ()
3. Smart agriculture has no effect on water usage. ()
4. Smart homes can adjust temperature automatically. ()
5. Artificial Intelligence cannot help in saving energy. ()
6. Smart transportation can reduce pollution. ()
7. Traditional systems are more efficient than smart systems. ()
8. Smart cities use technology to improve life quality. ()

B. Complete the Sentence (7 Questions)

1. Smart systems are used to _____ energy use.
a) increase b) ignore c) reduce d) destroy
2. IoT stands for _____.
a) Internet of Tools b) Internet of Things c) International of Time
d) Intelligent of Town
3. Smart agriculture helps save _____.
a) oil b) money c) water d) time
4. Smart transportation helps reduce _____.
a) pollution b) plants c) food d) devices
5. Smart homes use _____ to control lights and temperature.
a) AI b) books c) pens d) cars
6. Smart cities improve people's _____.
a) height b) health c) quality of life d) clothes
7. Artificial Intelligence is also called _____.
a) Automatic Information b) Artificial Imagination c) Artificial
Intelligence d) Artificial Internet

 Model 2**A. True or False (8 Questions)**

1. Smart systems work without any technology. ()
2. Smart cities use technology to manage resources. ()
3. Smart transportation helps reduce traffic problems. ()
4. Smart agriculture increases water waste. ()
5. IoT connects devices like cars and sensors. ()
6. Smart homes can save electricity. ()
7. Smart systems have no impact on climate change. ()
8. Artificial Intelligence supports smart systems. ()

B. Complete the Sentence (7 Questions)

1. Smart systems help to _____ energy and resources.
a) waste b) save c) burn d) hide
2. Smart homes use sensors to _____ lights automatically.
a) open b) close c) control d) delete
3. IoT connects _____ devices together.
a) random b) smart c) old d) broken
4. Smart agriculture helps farmers use _____ wisely.
a) toys b) animals c) water d) cars
5. Smart transportation reduces _____ pollution.
a) noise b) light c) air d) land
6. AI stands for _____ Intelligence.
a) Automatic b) Artificial c) Active d) Advanced
7. Smart cities make life _____ and better.
a) harder b) slower c) easier d) worse

Lesson 2: Advanced Cybersecurity Threats

1. Introduction to Advanced Cybersecurity Threats

- In previous years, we learned how to protect personal data using strong passwords and antivirus software.
- Now we explore more **advanced hacking techniques** used by cybercriminals.
- These threats are well-planned and target **system weaknesses** or **user behavior**.

☐ Advanced cyber threats = Professional thieves trying to steal your data digitally.

2. Ransomware Attacks

- Imagine someone locks your house and demands money to open it — this is what ransomware does to your computer.
- **Definition:**
 - Malicious software that encrypts files or locks your device.
 - Demands payment (ransom) to restore access.
- **How it spreads:**
 - Suspicious emails or links
 - Harmful websites
 - Untrusted software downloads
- Once inside, it locks files and shows a ransom message.

3. Advanced Social Engineering

- Social engineering is not about hacking devices — it's about **hacking people's minds**.
- It tricks users into giving away sensitive information.

Main Types:

- ✉ **Spear Phishing:**
 - Targeted fake emails or messages.
 - Hackers use personal details (name, company info) to gain trust.
- ☐ **Pretexting:**
 - Hacker pretends to be a trusted person (e.g., bank employee or IT support).
 - Uses a fake story to steal information.



- **Baiting:**

- Hacker offers something attractive (e.g., free USB or software).
- Victim downloads or plugs it in, and the system is infected.

4. Distributed Denial of Service (DDoS) Attacks

- Imagine a famous website with millions of visitors at the same time.
- Too much traffic causes the website to **crash**.
- Hackers use **botnets** (infected computers) to flood the site with requests.



- **Effect:**

- Website becomes very slow or stops working.
- Real users can't access the service.
- Similar to a traffic jam blocking a road.

5. Activity Examples for Students

- Think of real phishing messages or scam calls.
 - How can you tell if they are fake?
- Draw a simple diagram of how a DDoS attack happens.
- Discuss with classmates how DDoS affects businesses and users.

6. Key Protection Tips

- Always **check the sender** before clicking links.
- Avoid downloading from **untrusted sources**.
- Use **strong passwords** and keep antivirus software updated.
- Think carefully before sharing any personal information online.
- Remember: **You are the first line of defense** in the digital world.

✓ **Summary:**

- Advanced cyber threats include **ransomware**, **social engineering**, and **DDoS attacks**.
- These threats use **technology and human behavior** to harm systems.
- Awareness and safe online behavior can **protect your data**.

Lesson 2 Questions Model 1

A. True or False (8 Questions)

1. Ransomware locks your files and asks for money. ()
2. Phishing messages are always real. ()
3. Advanced threats can harm personal data. ()
4. Hackers use fake emails to steal information. ()
5. DDoS attacks make websites faster. ()
6. Social engineering tricks people, not machines. ()
7. Using strong passwords helps protect your data. ()
8. Hackers can attack systems in many ways. ()

B. Complete the Sentence (7 Questions)

1. Ransomware _____ files and demands payment.
a) deletes b) locks c) copies d) opens
2. Phishing is a way to steal _____.
a) clothes b) food c) information d) phones
3. DDoS attacks make websites _____.
a) work faster b) stop working c) grow d) play music
4. Social engineering tricks _____.
a) people b) computers c) animals d) cars
5. A strong _____ helps protect accounts.
a) password b) bag c) book d) ticket
6. Hackers use _____ emails to steal data.
a) fake b) official c) safe d) clean
7. To stay safe, always update _____.
a) clothes b) antivirus c) shoes d) bags

 Model 2**A. True or False (8 Questions)**

1. Ransomware is a type of advanced cyber threat. ()
2. DDoS attacks can make a website crash. ()
3. Hackers always use real information. ()
4. Social engineering is about tricking people. ()
5. Phishing messages are always safe to open. ()
6. Strong passwords can reduce risks. ()
7. Advanced threats can come from fake links. ()
8. Antivirus software can help protect devices. ()

B. Complete the Sentence (7 Questions)

1. A DDoS attack sends too many _____ to a website.
a) requests b) books c) cars d) windows
2. Phishing emails try to make you give your _____.
a) water b) money c) information d) tools
3. Ransomware demands _____ from the user.
a) food b) money c) tickets d) clothes
4. Social engineering is a type of _____ attack.
a) physical b) people-based c) water-based d) machine-only
5. Antivirus software helps _____ your data.
a) paint b) protect c) break d) remove
6. Hackers may use _____ links to attack you.
a) safe b) fake c) strong d) public
7. Creating a strong _____ is important for security.
a) wall b) password c) screen d) printer

Lesson 3: Big Data

1. Definition of Big Data

- Big data is a **large and complex collection of data** that cannot be processed efficiently using traditional tools (like Excel).
- By analyzing big data, organizations can make **better and faster decisions**.

2. Main Sources of Big Data

-  **Internet of Things (IoT):**
 - Smart devices such as smart fridges, watches, and connected cars generate data continuously.
 - Example: A smartwatch records heart rate, activity, and temperature and sends the data to an app.
-  **Social Media Platforms:**
 - User activities like posts, comments, photos, and likes generate large amounts of data.
 - Example: A photo posted on Instagram includes data about location, time, and reactions.
-  **Financial Transactions:**
 - Online payments, banking operations, and stock exchanges generate financial data.
 - Example: When someone buys something online with a credit card, data is collected about the amount, store, and location.
-  **Smart Devices:**
 - Mobile phones, cameras, and smart home devices collect usage and location data.

Example: Your phone tracks your location and app usage.

- **Digital Content:**

- Videos, photos, and audio uploaded or streamed online create huge amounts of data.
- Example: Watching a video on YouTube generates data about views and engagement.

- **Government Data:**

- Population records, taxes, and census data are important sources.
- Example: Census data about population and income levels.

- **Geographic and Spatial Data:**

- GPS and satellites collect data about locations, roads, and environments.
- Example: Navigation apps collect traffic data to improve directions.

3. The Five V's of Big Data

Characteristic	Meaning
Volume	The large amount of data collected from multiple sources.
Velocity	The high speed at which data is produced and processed.
Variety	The different types of data (structured, unstructured, semi-structured).
Veracity	The accuracy and reliability of the data.
Value	The usefulness and benefit gained from analyzing the data.

4. Types of Big Data

- **Structured Data:**

- Organized in rows and columns like traditional databases.
- Example: Customer records, financial data, transactions.

- **Unstructured Data:**

- Not organized in tables, harder to analyze using traditional tools.
- Example: Text, images, videos, social media posts.

- **Semi-Structured Data:**

- A mix of structured and unstructured data.
- Example: Emails (structured fields like sender and date + unstructured message body).

✓ Summary:

- Big data is **massive and complex information** generated from many sources.
- It has **5 key characteristics**: Volume, Velocity, Variety, Veracity, and Value.
- Understanding big data helps businesses and governments **make smarter decisions**.
- Types of big data include structured, unstructured, and semi-structured.

Lesson 3 Questions **Model 1****A. True or False (8 Questions)**

1. Big Data means a small amount of data. ()
2. Big Data comes from many different sources. ()
3. Social media is one of the sources of Big Data. ()
4. IoT devices can generate data. ()
5. Big Data is not useful for making decisions. ()
6. GPS and satellites are examples of data sources. ()
7. Big Data can be structured or unstructured. ()
8. Governments can use Big Data for planning. ()

B. Complete the Sentence (7 Questions)

1. Big Data is a _____ and complex collection of information.
a) small b) simple c) large d) easy
2. Social media platforms generate a lot of _____.
a) toys b) data c) water d) wood
3. Smart devices like watches are part of _____.
a) IoT b) GPS c) TV d) radio
4. Financial transactions are one _____ of Big Data.
a) house b) source c) car d) book
5. GPS and satellites provide _____ data.
a) geographic b) personal c) cooking d) random
6. Big Data can be _____, unstructured, or semi-structured.
a) orange b) physical c) structured d) written
7. Governments use Big Data to make better _____.
a) tables b) decisions c) chairs d) toys

✳️ □ Model 2**A. True or False (8 Questions)**

1. Big Data is only collected from one source. ()
2. IoT devices like smartwatches generate data. ()
3. Social media is a major source of Big Data. ()
4. Big Data can help companies make better decisions. ()
5. Government data can be part of Big Data. ()
6. Big Data is always structured. ()
7. Geographic data can come from satellites. ()
8. Digital content like videos can be part of Big Data. ()

B. Complete the Sentence (7 Questions)

1. Big Data is collected from many _____.
a) houses b) schools c) sources d) animals
2. IoT stands for Internet of _____.
a) Things b) Tools c) Tables d) Toys
3. Social media data includes posts, photos, and _____.
a) water b) comments c) bags d) trees
4. Financial transactions are examples of _____ data.
a) cooking b) money-related c) farming d) games
5. Satellite data is an example of _____ data.
a) physical b) personal c) geographic d) manual
6. Big Data can help organizations make _____ decisions.
a) better b) bad c) slow d) wrong
7. Unstructured data can include images, text, and _____.
a) pens b) videos c) chairs d) cars

حمل الآن

مجاناً وحصرياً

المراجعة رقم (4)

اختبار شهر اكتوبر



Question 1: Multiple Choice Questions

1. Which of the following technologies allows devices to connect to the internet and exchange data?

- a. AI
- b. Robotics
- c. IoT
- d. VR

2. What is the main function of artificial intelligence (AI)?

- a. Data transfer only.
- b. Data analysis and decision making.
- c. Device manufacturing.
- d. Powering the internet.

3. What is the name given to systems that combine IoT, AI, and robotics?

- a. Traditional systems.
- b. Manual systems.
- c. Mechanical systems.
- d. Interconnected intelligent systems.

4. How does IoT help in a smart home?

- a. By shutting down all devices.
- b. By repairing broken devices.
- c. By connecting devices to the internet to control them.
- d. By manually operating devices.



5. Why is artificial intelligence important in intelligent systems?

- a. Because it analyzes data and makes intelligent decisions.
- b. Because it manufactures devices.
- c. Because it repairs broken devices.
- d. Because it provides free internet.

6. How can robots help in agriculture?

- a. By selling crops.
- b. By automatically watering plants.

By shutting down farms.

- d. By storing water only.

7. What is the main role of sensors in IoT?

- a. Sending text messages.
- b. Manually operating devices.
- c. Collecting and transferring data.
- d. Repairing networks.

8. How can smart systems help reduce pollution?

- a. By increasing vehicle exhausts.
- b. By ignoring the problem.
- c. By shutting down all factories.
- d. By monitoring air quality and suggesting solutions.



9. If a car is equipped with IoT and AI, what can it do when a malfunction occurs?

- a. Send a message to the maintenance center with the location.
- b. Turn off without informing the driver.
- c. Wait until the driver detects the fault.
- d. Shut down all systems.

10. How can AI help manage energy in a smart home?

- a. By turning on appliances randomly.
- b. By analyzing usage patterns and saving energy.
- c. By turning off electricity completely.
- d. By increasing energy consumption.

11. If the soil is dry, how can smart systems in agriculture react?

- a. Ignore the problem.
- b. Reduce the amount of water.
- c. Send a message to the farmer without taking any action.
- d. Irrigate the soil automatically.

12. How can robots help in floods?

- a. By increasing the water level.
- b. By closing all roads for no reason.
- c. By draining water or rescuing people.
- d. By ignoring warnings.



13. What action can AI take when it detects increased air pollution?

- a. Ignore the data.
- b. Send warnings to residents and reduce factory emissions.
- c. Increase pollution intentionally.
- d. Turn off all devices.

14. What is the main difference between IoT and AI?

- a. AI connects to the internet, while IoT analyzes data.
- b. IoT builds robots, while AI repairs them.
- c. IoT connects to the internet, while AI analyzes data.
- d. There is no difference between them.

15. Why are robots considered an important part of intelligent systems?

- a. Because they completely replace humans.
- b. Because they perform mechanical or motor tasks based on AI decisions.
- c. Because they operate without an internet connection.
- d. Because they only analyze data.

16. How can intelligent systems help fight melting ice?

- a. By increasing the temperature.
- b. By melting the ice more quickly.
- c. By ignoring the problem.
- d. By monitoring the melting rate and proposing solutions.



17. What is the potential drawback of fully relying on IoT for smart systems?

- a. Reducing the efficiency of devices.
- b. Increasing internet speed.
- c. Inability to make decisions without AI.
- d. No need for robots.

18. How can AI improve the efficiency of self-driving cars?

- a. By increasing fuel consumption.
- b. By analyzing traffic and making safe decisions.
- c. By stopping the car suddenly.
- d. By ignoring traffic signals.

19. If you wanted to design a smart system to reduce water consumption in school, what components would you need?

- a. IoT to monitor water consumption, AI to analyze data, and robots to automatically turn off taps.
- b. Air conditioners only.
- c. Smartphones without an internet connection.
- d. Standard lighting systems.

20. How can robots be integrated into education using smart systems?

- a. By completely replacing teachers.
- b. By ignoring students' needs.
- c. By stopping all educational activities.
- d. By helping students solve questions and providing interactive explanations.



21. What is the suggested smart solution to address the problem of drought in agriculture?

- a. Using IoT to measure soil moisture, AI to calculate the required amount of water, and robots for automatic irrigation.
- b. Increasing water irrigation without analysis.
- c. Stopping agriculture completely.
- d. Relying only on rainfall.

22. How can a regular hospital be transformed into a smart hospital using smart systems?

- a. By removing all medical devices.
- b. By stopping all medical services.
- c. By linking medical devices to IoT, using AI to diagnose patients, and robots to assist in operations.
- d. By relying only on staff.

23. What is the smart solution to reduce traffic congestion in major cities?

- a. Increasing the number of cars.
- b. Using IoT to monitor traffic, AI to analyze data and direct cars, and robots to manage traffic lights.
- c. Closing all roads.
- d. Ignoring the problem.

24. What is the main drawback of using robots in elderly care?

- a. Inability to provide emotional support like humans.
- b. Increased efficiency.
- c. Time saving.
- d. Cost reduction.



25. How can the impact of intelligent systems on the environment be evaluated?

- a. They are not useful.
- b. They help monitor pollution and suggest sustainable solutions.
- c. They increase pollution.
- d. They are simply expensive.

26. What is one potential downside of self-driving cars?

- a. Their complete reliance on artificial intelligence may lead to errors in the event of a system failure.
- b. They save energy.
- c. They improve road safety.
- d. They reduce accidents.

27. How can the role of artificial intelligence in education be evaluated?

- a. It completely replaces teachers.
- b. It is not useful.
- c. It reduces students' interaction.
- d. It is a tool to enhance the learning experience and provide personalized explanation.

28. If you were asked to design a robot to assist the elderly, what features would you add?

- a. The ability to remind them of their medication times and call for help in emergencies.
- b. The ability to clean only.
- c. The ability to play only.
- d. Not communicating with them.



29. How can an early warning system for natural disasters be developed using smart systems?

- a. By ignoring data.
- b. By waiting until the disaster occurs.
- c. By shutting down all systems.
- d. By connecting sensors to the IoT, using AI to predict disasters, and sending warnings via robots.

30. What is an innovative function for using robots in public parks?

- a. Planting and trimming trees and cleaning parks automatically.
- b. Neglecting plants.
- c. Increasing litter.
- d. Not caring for visitors.

31. How can energy efficiency in cities be improved using smart systems?

- a. By increasing the consumption.
- b. By turning off electricity completely.
- c. By using IoT to monitor consumption, AI to analyze data, and robots to automatically adjust appliances.
- d. By ignoring the problem.

32. What are some innovative solutions to reduce waste in homes?

- a. Increased waste.
- b. Using robots to automatically sort waste, IoT to monitor quantities, and AI to suggest recycling routes.
- c. Dumping waste on the streets.
- d. Inattention.



33. What do IoT, AI, and robotics have in common in smart systems?

- a. They all operate independently without connectivity.
- b. There is no commonality.
- c. They are limited to large industries only.
- d. They integrate to create smart systems capable of communication, analysis, and implementation.

34. What is the biggest challenge in implementing smart systems on a large scale?

- a. High cost and maintenance requirements.
- b. Increased speed.
- c. Decreased efficiency.
- d. Unnecessary.

35. How can smart systems improve the quality of life in cities?

- a. By increasing pollution.
- b. By shutting down all services.
- c. By improving services such as transportation, health, and energy management.
- d. By ignoring the needs of the inhabitants.

36. What is the evidence that smart systems are successful in agriculture?

- a. Improving crops and reducing waste through smart irrigation and precise monitoring.
- b. Increasing water waste.
- c. Neglecting farms.
- d. No results found.



37. Ransomware is a type of _____.

- a. hardware
- b. malware
- c. good software
- d. password

38. Which of the following is an example of ransomware?

- a. A program that displays annoying ads.
- b. A program that encrypts your files and demands a ransom to decrypt them.
- c. A program that cleans temporary files from your device.
- d. A program that helps you organize your files.

39. Advanced cyber threats target _____.

- a. devices
- b. users
- c. systems
- d. all of them

40. What is the primary goal of a distributed denial-of-service (DDoS) attack?

- a. Stealing users' data.
- b. Disabling a website or online service.
- c. Spreading false information.
- d. Spying on users' communications.



41. _____ is considered a hack of minds rather than software.

- a. DDoS attack
- b. Ransomware
- c. Social engineering
- d. None of them

42. Ransomware demands _____ to unlock files.

- a. passwords
- b. money
- c. software
- d. updates

43. All of the following are ways ransomware can spread, except _____.

- a. malicious links
- b. safe websites
- c. suspicious emails
- d. untrusted software

44. Which of the following is considered a social engineering technique?

- a. Using programs to crack passwords.
- b. Tricking people into revealing their information.
- c. Sending viruses via emails.
- d. Exploiting software vulnerabilities.



45. A fake email pretending to be from the bank is an example of _____.

- a. pretexting
- b. baiting
- c. spear phishing
- d. ransomware

46. In a DDoS attack, attackers use many devices called _____.

- a. viruses
- b. botnets
- c. passwords
- d. servers

47. What are the botnets used in DDoS attacks?

- a. Advanced artificial intelligence programs.
- b. A network of compromised devices that are remotely controlled.
- c. Superfast computers.
- d. A group of secure servers.

48. All of the following are social engineering methods, except _____.

- a. baiting
- b. pretexting
- c. spear phishing
- d. ransomware

49. Big data cannot be processed efficiently using

- a. Hadoop
- b. SQL
- c. Excel
- d. none of them



50. A smart watch collecting heart rate is an example of data from

- a. IoT devices
- b. social media
- c. financial systems
- d. GPS

51. The value in big data means the

- a. size
- b. speed
- c. usefulness
- d. variety

52. Electronic payments and stock trading are sources of

- a. GPS data
- b. financial data
- c. digital content
- d. device data

53. _____ in the 5Vs of big data refers to the reliability and quality of the data.

- a. Velocity
- b. Variety
- c. Value
- d. Veracity

54. Population census is an example of

- a. social media
- b. governmental data
- c. GPS
- d. financial data

55. Data organized in tables is an example of

- a. structured data
- b. unstructured data
- c. semi-structured data
- d. random data



56. _____ in the 5Vs of big data refers to the speed of data.

- a. Variety
- b. Velocity
- c. volume
- d. Value

57. Instagram posts and Facebook comments are examples of data from

- a. government
- b. social media
- c. financial systems
- d. sensors

58. Government data includes

- a. censuses
- b. taxes
- c. statistics
- d. all of them

59. A Facebook post containing text, images, and videos is an example of

- a. structured data
- b. semi-structured data
- c. unstructured data
- d. none of them

60. The number of views and comments on a YouTube video is considered

- a. financial data
- b. digital content
- c. IoT data
- d. government data

61. In the 5Vs of big data, which 'V' refers to the massive amount of data?

- a. Velocity
- b. Variety
- c. Value
- d. Volume



62. Email data is an example of _____ data.

- a. structured
- b. semi-structured
- c. unstructured
- d. none of them

63. Data _____ is the first stage of big data processing.

- a. storage
- b. collection
- c. cleaning
- d. analysis

64. Which of the following creates algorithms that mimic human intelligence?

- a. AI
- b. Physics
- c. Biology
- d. History

65. Removing errors and duplication is called data _____.

- a. storage
- b. analysis
- c. cleaning
- d. extraction

66. In big data processing, _____ comes next after data analysis.

- a. data collection
- b. data cleaning
- c. information extraction
- d. data storage

67. Big data storage usually happens in _____.

- a. clouds
- b. servers
- c. USB
- d. a or b



68. _____ creates algorithms that mimic human intelligence.

- a. AI
- b. IoT
- c. E-commerce
- d. None of them

69. Predicting future weather using big data is an example of _____.

- a. cybersecurity
- b. machine learning
- c. NLP
- d. cleaning

70. _____ platforms use big data to adjust prices and improve sales.

- a. E-commerce
- b. AI
- c. Cybersecurity
- d. None of them

71. A machine learning model trained on more data will usually _____.

- a. learn slower
- b. be less accurate
- c. be more accurate
- d. forget patterns

72. NLP applications require processing _____.

- a. images
- b. text datasets
- c. maps
- d. audio only

73. Big data improves AI by reducing the _____.

- a. cost
- b. collection
- c. storage
- d. overfitting



74. Predicting customer behavior with AI is called

- a. cleaning
- b. extraction
- c. predictive analytics
- d. storage

75. Which best describes the relationship between big data and AI?

- a. AI creates raw data.
- b. Big data depends on AI fully.
- c. Big data feeds AI, and AI extracts value.
- d. They are unrelated.

Question2: Put (T) or (F):

- 1- IoT connects devices to the internet for sharing data. ()
- 2- Robotics involve devices that can move and perform tasks similar to humans. ()
- 3- Interconnected intelligent systems need humans to control every action. ()
- 4- In a smart home, AI can turn on the air conditioner before you arrive. ()
- 5- A smart car uses robotics to analyze road hazards. ()
- 6- IoT in smart farming measures soil moisture to determine watering needs. ()
- 7- Voice assistants use robotics to respond to questions. ()
- 8- Smart systems can help reduce air pollution by measuring harmful gases. ()
- 9- Global warming is caused by a decrease in carbon dioxide emissions. ()
- 10- Smart systems can predict floods by measuring rainfall. ()
- 11- Advanced cyber threats only target devices. ()
- 12- Ransomware permanently damages your device. ()
- 13- Spear phishing targets specific people or organizations. ()
- 14- Distributed denial-of-service (DDoS) attacks target only one device. ()
- 15- Baiting involves giving free USB drives with malware. ()
- 16- Social engineering relies on exploiting vulnerabilities in technical systems. ()
- 17- Updating antivirus software helps prevent ransomware. ()
- 18- In a DDoS attack, attackers often use botnets. ()
- 19- Sharing your personal information with anyone you trust online is always safe. ()



- 20- Spear phishing uses personal information to seem convincing. ()
- 21- DDoS attacks allow legitimate users to access websites. ()
- 22- Sharing your password is the best way to stay safe online. ()
- 23- Digital content, such as videos, generates big data. ()
- 24- Big data can be easily processed using Excel. ()
- 25- Big data analysis allows analysts, researchers, and entrepreneurs to make better and faster decisions. ()
- 26- All data collected through social media is documented. ()
- 27- When you make an online purchase using a credit card, data about the amount, the store, and the geographic location is recorded. ()
- 28- Your mobile phone constantly tracks your geographic location and collects data about the places you visit and the apps you use. ()
- 29- Videos, images, and audio content uploaded or viewed online do not generate big data. ()
- 30- Governments generate data through population registers, statistics, tax data, and censuses. ()
- 31- Satellites and GPS devices collect data about geographic location, roads, and the environment. ()
- 32- The characteristics of big data include volume and value. ()
- 33- The speed of data generation is not a characteristic of big data. ()
- 34- The variety of data types include structured data (such as databases) and unstructured data (such as text, images, and videos). ()
- 35- Veracity refers to the reliability and quality of data. ()
- 36- Structured data is data that comes in an unstructured form, such as customer data and financial data. ()
- 37- Unstructured data is data that does not come in a structured form, such as tables or databases. ()
- 38- Semi-structured data is a hybrid of structured and unstructured data. ()
- 39- Emails are a good example of structured data. ()
- 40- Big data has no role in the development and effectiveness of artificial intelligence. ()
- 41- AI technologies help in processing and analyzing big data. ()
- 42- One of the stages of big data processing is data cleaning. ()
- 43- The data collection stage is the process of collecting large amounts of data from various sources. ()
- 44- The process of processing big data does not require storing that data. ()
- 45- Data cleaning means dealing with errors, duplication, or incorrect data. ()
- 46- Data analysis occurs using advanced tools and techniques, such as artificial intelligence. ()



- 47- Information extraction takes place before data analysis. ()
- 48- E-commerce platforms rely on big data to understand the customer behavior. ()
- 49- Big data does not allow models to be trained on a wide range of scenarios and conditions. ()
- 50- Computer vision applications, such as face recognition and object detection, do not require massive datasets of images and videos to train their models. ()
- 51- The role of big data in AI is to improve accuracy and performance and enable AI application.



Question 1: Multiple Choice Questions

1. Which of the following technologies allow(s) devices to connect to the internet and exchange data?

- a. AI
- b. Robotics
- c. IoT
- d. VR

2. What is the main function of artificial intelligence (AI)?

- a. Data transfer only.
- b. Data analysis and decision making.
- c. Device manufacturing.
- d. Powering the internet.

3. What is the name given to systems that combine IoT, AI, and robotics?

- a. Traditional systems.
- b. Manual systems.
- c. Mechanical systems.
- d. Interconnected intelligent systems.

4. How does IoT help in a smart home?

- a. By shutting down all devices.
- b. By repairing broken devices.
- c. By connecting devices to the internet to control them.
- d. By manually operating devices.



5. Why is artificial intelligence important in intelligent systems?

- a. Because it analyzes data and makes intelligent decisions.
- b. Because it manufactures devices.
- c. Because it repairs broken devices.
- d. Because it provides free internet.

6. How can robots help in agriculture?

- a. By selling crops.
- b. By automatically watering plants.
- c. By shutting down farms.
- d. By storing water only.

7. What is the main role of sensors in IoT?

- a. Sending text messages.
- b. Manually operating devices.
- c. Collecting and transferring data.
- d. Repairing networks.

8. How can smart systems help reduce pollution?

- a. By increasing vehicle exhausts.
- b. By ignoring the problem.
- c. By shutting down all factories.
- d. By monitoring air quality and suggesting solutions.



9. If a car is equipped with IoT and AI, what can it do when a malfunction occurs?

- a. Send a message to the maintenance center with the location.
- b. Turn off without informing the driver.
- c. Wait until the driver detects the fault.
- d. Shut down all systems.

10. How can AI help manage energy in a smart home?

- a. By turning on appliances randomly.
- b. By analyzing usage patterns and saving energy.
- c. By turning off electricity completely.
- d. By increasing energy consumption.

11. If the soil is dry, how can smart systems in agriculture react?

- a. Ignore the problem.
- b. Reduce the amount of water.
- c. Send a message to the farmer without taking any action.
- d. Irrigate the soil automatically.

12. How can robots help in floods?

- a. By increasing the water level.
- b. By closing all roads for no reason.
- c. By draining water or rescuing people.
- d. By ignoring warnings.



13. What action can AI take when it detects increased air pollution?

- a. Ignore the data.
- b. Send warnings to residents and reduce factory emissions.
- c. Increase pollution intentionally.
- d. Turn off all devices.

14. What is the main difference between IoT and AI?

- a. AI connects to the internet, while IoT analyzes data.
- b. IoT builds robots, while AI repairs them.
- c. IoT connects to the internet, while AI analyzes data.
- d. There is no difference between them.

15. Why are robots considered an important part of intelligent systems?

- a. Because they completely replace humans.
- b. Because they perform mechanical or motor tasks based on AI decisions.
- c. Because they operate without an internet connection.
- d. Because they only analyze data.

16. How can intelligent systems help fight melting ice?

- a. By increasing the temperature.
- b. By melting the ice more quickly.
- c. By ignoring the problem.
- d. By monitoring the melting rate and proposing solutions.

17. What is the potential drawback of fully relying on IoT for smart systems?

- a. Reducing the efficiency of devices.
- b. Increasing the internet speed.
- c. Inability to make decisions without AI.



d. No need for robots.

18. How can AI improve the efficiency of self-driving cars?

a. By increasing fuel consumption.

b. By analyzing traffic and making safe decisions.

c. By stopping the car suddenly.

d. By ignoring traffic signals.

19. If you wanted to design a smart system to reduce water consumption in a school, what components would you need?

a. IoT to monitor water consumption, AI to analyze data, and robots to automatically turn off taps.

b. Air conditioners only.

c. Smartphones without an internet connection.

d. Standard lighting systems.

20. How can robots be integrated into education using smart systems?

a. By completely replacing teachers.

b. By ignoring students' needs.

c. By stopping all educational activities.

d. By helping students solve questions and providing interactive explanations.

21. What is the suggested smart solution to address the problem of drought in agriculture?

a. Using IoT to measure soil moisture, AI to calculate the required amount of water, and robots for automatic irrigation.

b. Increasing water irrigation without analysis.

c. Stopping agriculture completely.

d. Relying only on rainfall.



22. How can a regular hospital be transformed into a smart hospital using smart systems?

- a. By removing all medical devices.
- b. By stopping all medical services.
- c. By linking medical devices to IoT, using AI to diagnose patients, and robots to assist in operations.
- d. By relying only on staff.

23. What is the smart solution to reduce traffic congestion in major cities?

- a. Increasing the number of cars.
- b. Using IoT to monitor traffic, AI to analyze data and direct cars, and robots to manage traffic lights.
- c. Closing all roads.
- d. Ignoring the problem.

24. What is the main drawback of using robots in elderly care?

- a. Inability to provide emotional support like humans.
- b. Increased efficiency.
- c. Time saving.
- d. Cost reduction.

25. How can the impact of intelligent systems on the environment be evaluated?

- a. They are not useful.
- b. They help monitor pollution and suggest sustainable solutions.
- c. They increase pollution.
- d. They are simply expensive.



26. What is one potential downside of self-driving cars?

- a. Their complete reliance on artificial intelligence may lead to errors in the event of a system failure.
- b. They save energy.
- c. They improve road safety.
- d. They reduce accidents.

27. How can the role of artificial intelligence in education be evaluated?

- a. It completely replaces teachers.
- b. It is not useful.
- c. It reduces students' interaction.
- d. It is a tool to enhance the learning experience and provide personalized explanation.

28. If you were asked to design a robot to assist the elderly, what features would you add?

- a. The ability to remind them of their medication times and call for help in emergencies.
- b. The ability to clean only.
- c. The ability to play only.
- d. Not communicating with them.

29. How can an early warning system for natural disasters be developed using smart systems?

- a. By ignoring data.
- b. By waiting until the disaster occurs.
- c. By shutting down all systems.
- d. By connecting sensors to the IoT, using AI to predict disasters, and sending warnings via robots.



30. What is an innovative function for using robots in public parks?

- a. Planting and trimming trees, and cleaning parks automatically.
- b. Neglecting plants.
- c. Increasing litter.
- d. Not caring for visitors.

31. How can energy efficiency in cities be improved using smart systems?

- a. By increasing the consumption.
- b. By turning off electricity completely.
- c. By using IoT to monitor consumption, AI to analyze data, and robots to automatically adjust appliances.
- d. By ignoring the problem.

32. What are some innovative solutions to reduce waste in homes?

- a. Increased waste.
- b. Using robots to automatically sort waste, IoT to monitor quantities, and AI to suggest recycling routes.
- c. Dumping waste on the streets.
- d. Inattention.

33. What do IoT, AI, and robotics have in common in smart systems?

- a. They all operate independently without connectivity.
- b. There is no commonality.
- c. They are limited to large industries only.
- d. They integrate to create smart systems capable of communication, analysis, and implementation.



34. What is the biggest challenge in implementing smart systems on a large scale?

a. High cost and maintenance requirements.

b. Increased speed.

c. Decreased efficiency.

d. Unnecessary.

35. How can smart systems improve the quality of life in cities?

a. By increasing pollution.

b. By shutting down all services.

c. By improving services such as transportation, health, and energy management.

d. By ignoring the needs of the inhabitants.

36. What is the evidence that smart systems are successful in agriculture?

a. Improving crops and reducing waste through smart irrigation and precise monitoring.

b. Increasing water waste.

c. Neglecting farms.

d. No results found.

37. Ransomware is a type of _____.

a. hardware

b. malware

c. good software

d. password



38. Which of the following is an example of ransomware?

- a. A program that displays annoying ads.
- b. A program that encrypts your files and demands a ransom to decrypt them.
- c. A program that cleans temporary files from your device.
- d. A program that helps you organize your files.

39. Advanced cyber threats target _____.

- a. devices
- b. users
- c. systems
- d. all of them

40. What is the primary goal of a distributed denial-of-service (DDoS) attack?

- a. Stealing users' data.
- b. Disabling a website or online service.
- c. Spreading false information.
- d. Spying on users' communications.

41. _____ is considered a hack of minds rather than software.

- a. DDoS attack
- b. Ransomware
- c. Social engineering
- d. None of them

42. Ransomware demands _____ to unlock files.

- a. passwords
- b. money
- c. software



d. updates

43. All of the following are ways ransomware can spread, except _____.

a. malicious links

b. safe websites

c. suspicious emails

d. untrusted software

44. Which of the following is considered a social engineering technique?

a. Using programs to crack passwords.

b. Tricking people into revealing their information.

c. Sending viruses via emails.

d. Exploiting software vulnerabilities.

45. A fake email pretending to be from the bank is an example of _____.

a. pretexting

b. baiting

c. spear phishing

d. ransomware

46. In a DDoS attack, attackers use many devices called _____.

a. viruses

b. botnets

c. passwords

d. servers



47. What are the botnets used in DDoS attacks?

- a. Advanced artificial intelligence programs.
- b. A network of compromised devices that are remotely controlled.
- c. Superfast computers.
- d. A group of secure servers.

48. All of the following are social engineering methods, except _____.

- a. baiting
- b. pretexting
- c. spear phishing
- d. ransomware

49. Big data cannot be processed efficiently using

- a. Hadoop
- b. SQL
- c. Excel
- d. none of them

50. A smart watch collecting heart rate is an example of data from

- a. IoT devices
- b. social media
- c. financial systems
- d. GPS

51. The value in big data means the

- a. size
- b. speed
- c. usefulness
- d. variety



52. Electronic payments and stock trading are sources of

- a. GPS data
- b. financial data
- c. digital content
- d. device data

53. _____ in the 5Vs of big data refers to the reliability and quality of the data.

- a. Velocity
- b. Variety
- c. Value
- d. Veracity

54. Population census is an example of

- a. social media
- b. governmental data
- c. GPS
- d. financial data

55. Data organized in tables is an example of

- a. structured data
- b. unstructured data
- c. semi-structured data
- d. random data

56. _____ in the 5Vs of big data refers to the speed of data.

- a. Variety
- b. Velocity
- c. volume
- d. Value

57. Instagram posts and Facebook comments are examples of data from

- a. government
- b. social media
- c. financial systems
- d. sensors



58. Government data includes

- a. censuses
- b. taxes
- c. statistics
- d. all of them

59. A Facebook post containing text, images, and videos is an example of

- a. structured data
- b. semi-structured data
- c. unstructured data
- d. none of them

60. The number of views and comments on a YouTube video is considered

- a. financial data
- b. digital content
- c. IoT data
- d. government data

61. In the 5Vs of big data, which 'V' refers to the massive amount of data?

- a. Velocity
- b. Variety
- c. Value
- d. Volume

62. Email data is an example of _____ data.

- a. structured
- b. semi-structured
- c. unstructured
- d. none of them

63. Data _____ is the first stage of big data processing.

- a. storage
- b. collection
- c. cleaning
- d. analysis



64. Which of the following creates algorithms that mimic human intelligence?

- a. AI
- b. Physics
- c. Biology
- d. History

65. Removing errors and duplication is called data _____.

- a. storage
- b. analysis
- c. cleaning
- d. extraction

66. In big data processing, _____ comes next after data analysis.

- a. data collection
- b. data cleaning
- c. information extraction
- d. data storage

67. Big data storage usually happens in _____.

- a. clouds
- b. servers
- c. USB
- d. a or b

68. _____ creates algorithms that mimic human intelligence.

- a. AI
- b. IoT
- c. E-commerce
- d. None of them

69. Predicting future weather using big data is an example of _____.

- a. cybersecurity
- b. machine learning
- c. NLP
- d. cleaning



70. _____ platforms use big data to adjust prices and improve sales.

- a. E-commerce
- b. AI
- c. Cybersecurity
- d. None of them

71. A machine learning model trained on more data will usually _____.

- a. learn slower
- b. be less accurate
- c. be more accurate
- d. forget patterns

72. NLP applications require processing _____.

- a. images
- b. text datasets
- c. maps
- d. audio only

73. Big data improves AI by reducing the _____.

- a. cost
- b. collection
- c. storage
- d. overfitting

74. Predicting customer behavior with AI is called

- a. cleaning
- b. extraction
- c. predictive analytics
- d. storage

75. Which best describes the relationship between big data and AI?

- a. AI creates raw data.
- b. Big data depends on AI fully.
- c. Big data feeds AI, and AI extracts value.
- d. They are unrelated.



Question2: Put (T) or (F):

- 1- IoT connects devices to the internet for sharing data. (T)
- 2- Robotics involve devices that can move and perform tasks similar to humans. (T)
- 3- Interconnected intelligent systems need humans to control every action. (F)
- 4- In a smart home, AI can turn on the air conditioner before you arrive. (T)
- 5- A smart car uses robotics to analyze road hazards. (F)
- 6- IoT in smart farming measures soil moisture to determine watering needs. (T)
- 7- Voice assistants use robotics to respond to questions. (F)
- 8- Smart systems can help reduce air pollution by measuring harmful gases. (T)
- 9- Global warming is caused by a decrease in carbon dioxide emissions. (F)
- 10- Smart systems can predict floods by measuring rainfall. (T)
- 11- Advanced cyber threats only target devices. (F)
- 12- Ransomware permanently damages your device. (F)
- 13- Spear phishing targets specific people or organizations. (T)
- 14- Distributed denial-of-service (DDoS) attacks target only one device. (F)
- 15- Baiting involves giving free USB drives with malware. (T)
- 16- Social engineering relies on exploiting vulnerabilities in technical systems. (F)
- 17- Updating antivirus software helps prevent ransomware. (T)
- 18- In a DDoS attack, attackers often use botnets. (T)
- 19- Sharing your personal information with anyone you trust online is always safe. (F)
- 20- Spear phishing uses personal information to seem convincing. (T)
- 21- DDoS attacks allow legitimate users to access the websites. (F)
- 22- Sharing your password is the best way to stay safe online. (F)
- 23- Digital content, such as videos, generates big data. (T)
- 24- Big data can be easily processed using Excel. (F)
- 25- Big data analysis allows analysts, researchers, and entrepreneurs to make better and faster decisions. (T)
- 26- All data collected through social media is documented. (F)



- 27- When you make an online purchase using a credit card, data about the amount, the store, and the geographic location is recorded. (T)
- 28- Your mobile phone constantly tracks your geographic location and collects data about the places you visit and the apps you use. (T)
- 29- Videos, images, and audio content uploaded or viewed online do not generate big data. (F)
- 30- Governments generate data through population registers, statistics, tax data, and censuses. (T)
- 31- Satellites and GPS devices collect data about geographic location, roads, and the environment. (T)
- 32- The characteristics of big data include volume and value. (T)
- 33- The speed of data generation is not a characteristic of big data. (F)
- 34- The variety of data types includes structured data (such as databases) and unstructured data (such as text, images, and videos). (T)
- 35- Veracity refers to the reliability and quality of data. (T)
- 36- Structured data is data that comes in an unstructured form, such as customer data and financial data. (F)
- 37- Unstructured data is data that does not come in a structured form, such as tables or databases. (T)
- 38- Semi-structured data is a hybrid of structured and unstructured data. (T)
- 39- Emails are a good example of structured data. (F)
- 40- Big data has no role in the development and effectiveness of artificial intelligence. (F)
- 41- AI technologies help in processing and analyzing big data. (T)
- 42- One of the stages of big data processing is data cleaning. (T)
- 43- The data collection stage is the process of collecting large amounts of data from various sources. (T)
- 44- The process of processing big data does not require storing that data. (F)
- 45- Data cleaning means dealing with errors, duplication, or incorrect data. (T)
- 46- Data analysis occurs using advanced tools and techniques, such as artificial intelligence. (T)
- 47- Information extraction takes place before data analysis. (F)
- 48- E-commerce platforms rely on big data to understand the customer behavior. (T)
- 49- Big data does not allow models to be trained on a wide range of scenarios and conditions. (F)
- 50- Computer vision applications, such as face recognition and object detection, do not require massive datasets of images and videos to train their models. (F)



51- The role of big data in AI is to improve accuracy and performance and enable AI application (T)



كيفية طباعة صفحات معينة من ملف معين مثلا ازاي نطبع الصفحات من صفحة 4 الى صفحة 9

